

Operable Unit 4

ELMENDORF AIR FORCE BASE, ALASKA

3rd Wing Public Affairs (907) 552- 8970 Fax 552-5111 www.elmendorf.af.mil

October 2004

Active Operable Unit 4 East Source Areas: SD28, SD29, SS10.

Active Operable Unit 4 West Source Areas: SD24, SD25, FT23.

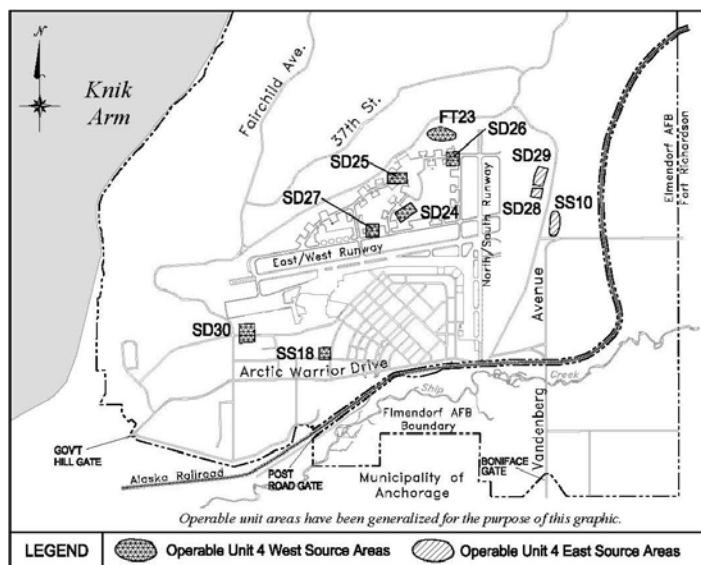
Closed Source Areas: SD26, SD27, SD30, SS18.

Contaminant Sources: Leaking underground fuel tanks, fire training area, asphalt processing area, floor drains in hangars.

Media Affected: Groundwater and soil.

Contaminants of Concern Outlined in the Operable Unit 4 Record of Decision:

Operable Unit 4 Groundwater: Cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, 1,1,1-trichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, chloroform, dieldrin, chloromethane, carbon tetrachloride, vinyl chloride, benzene, ethylbenzene, toluene, and xylenes. **Operable Unit 4 Soil:** Benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, benzo(a)anthracene, PCB-1260, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, benzene, ethylbenzene, toluene, xylenes, diesel-range organics, and gasoline-range organics.



Status: Insitu bioventing (introducing air to the subsurface to aid biological breakdown of contaminants) has been used to treat soil at FT23, SD25, and SS10. As a result, soil at SD25 and SS10 has reached Record of Decision cleanup goals. Bioventing is ongoing at FT23. Groundwater monitoring is also ongoing at Operable Unit 4. Land use controls restrict use of shallow groundwater.

Key Milestones

ACTIVITY	DATE
Federal Facilities Agreement Signed	November 1991
Management Plan	February 16, 1993
Remedial Investigation / Feasibility Study	September 2, 1994
Record of Decision	October 10, 1995
Remedial Design / Action Scope of Work	October 31, 1995
Remedial Design Completion	September 29, 1995
Remedial Action Start	November 30, 1995
Remedial Action Report	March 20, 1998
First Five-Year Remedy Review	October 20, 1998
Second Five-Year Remedy Review	December 17, 2003

Site Description

Location: Operable Unit 4 consists of ten source areas that include floor drains in eight maintenance facilities (SD24, SD25, SD26, SD27, SD28, SD29, SD30, and SS18), a fire training area (FT23), and a former asphalt processing area (SS10). Most Operable Unit 4 sources are located in the east-central area of Elmendorf Air Force Base, while two sources, SD30 and SS18, are located to the south near 2nd Street.

Contamination Overview: In May 1993, a No Further Action Decision Document was signed for SS18, SD26, SD27, and SD30 by the Air Force, the U.S. Environmental Protection Agency, and Alaska Department of Environmental Conservation. The remaining sources were divided into Operable Unit 4 East and Operable Unit 4 West. Operable Unit 4 East consists of an area encircling SD28, SD29, and SS10. Operable Unit 4 West includes SD24, SD25, and FT23.

During the summer of 1994, remedial efforts at SS10 removed both liquid asphalt and asphalt-containing soils remaining from former asphalt batch operations. More than 100,000 gallons of asphalt were recovered and recycled for reuse on Base. Upon concluding these activities, the Remedial Action Report was published in March 1998.

Contaminants of Concern

Contaminants of concern were detected in groundwater and soil at Operable Unit 4. Maximum detection levels are compared to cleanup levels stipulated on the Operable Unit 4 Record of Decision. Contaminants, maximum concentrations detected, current contaminant levels, and applicable regulatory standards for groundwater and soil are presented in Table 1.

<i>Table 1. Current Contaminants of Concern</i>				
<i>Source Area</i>	<i>Contaminant</i>	<i>Maximum Concentration</i>	<i>Current Concentration</i>	<i>Cleanup Levels</i>
<i>Groundwater (micrograms per liter)</i>				
FT23	Tetrachloroethene	40.5	17	5
	Trichloroethene	74.7	12	5
	Benzene	398	6.3	5
SD24	Benzene	266	28	5
SD25	Benzene	2,600	1,500	5
SD29	Tetrachloroethene	23	7.2	5
	Trichloroethene	19.5	12	5
<i>Soil (milligrams per kilogram)</i>				
FT23	Diesel-Range Organics	110,000	5,200	2,000

Bold font indicates that the concentration exceeds cleanup levels.

Groundwater: Benzene, tetrachloroethene, and trichloroethene are the remaining contaminants of concern

in groundwater that exceed cleanup levels. Sources of these materials were leaking underground fuel storage tanks and related valves and pipes, fuels and solvents used for fire training, drums of asphalt stored on the ground, and floor drains from hangars.

Soil: Bioventing is being performed to remove diesel-range organics from soil at FT23.

Potential Pathways and Receptors

Under current site use, direct exposure to contaminated groundwater is not possible because land use controls prohibit use of water from the shallow aquifer. Groundwater does not emerge as surface water seeps in or near Operable Unit 4 so there is no complete pathway for this media.

Contamination is present in both the shallow and deep soils. Complete pathways exist to both human and animal receptors for soil since contamination is near the ground surface. A complete pathway for exposure to deep soil contamination does not exist since it would require excavation or some other below ground surface work for an exposure potential to exist.

Summary

Groundwater and soil contamination has occurred as a result of Operable Unit 4 site operations. Soil contamination has attenuated and land use controls have been implemented. The remedy for contaminated media at Operable Unit 4 involves monitoring natural attenuation in the shallow groundwater and a continuation of soil bioventing at FT23.

The recent five-year review at Operable Unit 4 determined that the selected remedies are functioning as intended. These remedies are considered protective of human health and the environment and as such, shall remain in place.

Information Repositories

Documents associated with these project activities are available for public review at:

Elmendorf Library
3rd Services Squadron
10480 22nd Street
Elmendorf AFB, AK 99506
(907) 552-3787

Alaska Resources Library & Information Services
(ARLIS)
3211 Providence Drive
Anchorage, AK 99508
(907) 272-7547

For additional information, please contact 3rd Wing Public Affairs by telephone at (907) 552-8970, or at 10480 22nd Street, Suite 118, Elmendorf AFB, AK 99506-2500.